

### CLAIMS

5           The embodiments of the invention in which an exclusive property or  
privilege is claimed are defined as follows:

1. A stabilized scintillation detector, comprising:
  - (a) an LED that periodically produces a light pulse;
  - (b) a beam splitter that impinges some of said light pulse on a  
10       photodetector and on a photomultiplier;
  - (c) a scintillator that receives radiation and is coupled to said  
photomultiplier; and
  - (d) a control unit that receives signals from said photodetector and said  
15       photomultiplier representative of said light pulse received by said photodetector  
and said photomultiplier and receives a signal representative of temperature of  
said scintillator and outputs, in part, a signal to said photomultiplier to stabilize  
said photomultiplier.
2. A method of using a scintillation detector, comprising:
  - 20       (a) periodically producing a light pulse;
  - (b) impinging some of said light pulse on a photodetector and on a  
photomultiplier;
  - (c) using a scintillator to receive radiation, said scintillator being to said  
photomultiplier; and
  - 25       (d) receiving signals from said photodetector and said photomultiplier  
representative of said light pulse received by said photodetector and said  
photomultiplier and receiving a signal representative of temperature of said  
scintillator and outputting, in part, a signal to said photomultiplier to stabilize  
said photomultiplier.